

REMARKS

Reconsideration in view of the foregoing amendments and following remarks is respectfully requested.

This amendment is in response to the Office action dated December 16, 2003, in which claim 1 was allowed.

This amendment cancels claim 1 and substitutes new claim 2.

Upon studying the allowed claim 1, it became apparent that the claim had several defects that needed correction. For instance, several terms lacked proper antecedent basis. In this regard, the terms "the forward portion" (line 8), "the base edge" (line 10), and "the lower portion" (lines 10-11) lacked clear antecedent basis. Also, it was noted that the "blades" were never actually positively recited in the claim. Further, the claim is ambiguous as to the number of cutting blades involved; observe that line 2 mentions "a plurality" whereas line 8 specifies "one or more".

To eliminate the above mentioned informalities in the allowed claim 1, as well as other informalities therein, the new claim 2 is presented. This new claim includes proper antecedent basis for all terms, recites the cutting blades positively, makes it clear that the claimed arrowhead includes a plurality of the cutting blades, and presents the elements in a better arranged sequence than did original claim 1.

No new matter has been added in the new claim 2, and all features pointed to by the Examiner in his Statement of Reasons for Allowance are still present in the new claim 2. To aid the Examiner in verifying that all of the features specified in his Statement of Reasons for Allowance are in fact in the new claim 2, the features have been numbered as 1-7 in the Statement of Reasons for Allowance (see the attached copy thereof) and the numbers have been placed in the margin of the attached copy of claim 2 adjacent to the features. Also, the attached copy of new claim 2 is color coded and the attached copy of original

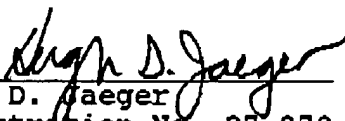
claim 1 is color coded so that a comparison of the two claims can be easily accomplished.

The Examiner is respectfully requested to enter this amendment which introduces no new issues but simply improves the form of the allowed claim so that it is free from any possible ambiguity or misunderstanding.

Reconsideration and entry of the new claim 2 are respectfully requested.

Respectfully submitted,

HUGH D. JAEGER, P.A.


Hugh D. Jaeger
Registration No. 27,270
1000 Superior Blvd., Suite 302
Wayzata, MN 55391-1873
Telephone: 952-475-1880
Facsimile: 952-475-2930

02/12/2004

Attachments: Marked-up Copy of Statement of Reasons for Allowance.
 Color-coded Copy of Claim 2.
 Color-coded Copy of Claim 1.

MYFILES\PLEAD\PL4427

Application/Control Number: 10-603755

Page 2

Art Unit: 3712

The following is an examiner's statement of reasons for allowance: The prior art does not disclose an arrowhead including a ① fixture having a chisel point, and ② a circular recess behind the chisel point for the capture of the forward portion of blades; ③ a first shaft extending from the recess; ④ an annular beveled ring on the shaft, and having slots to accommodate the base edges of the blades; ⑤ a second shaft portion extending rearward from the beveled ring, having slots which also accommodate the base edges of the blades; ⑥ a threaded shaft extending rearward from the slotted shaft; and ⑦ a mounting ferrule on the fixture to capture rearward protrusions of the blades.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

* * * * *

This letter was prepared by Examiner John Ricci, who can be reached at:

Voice: 703-308-4751

NEW CLAIM
for
Patent Application S.N. 10/603,755
"Wide Angle Arrowhead"

- 2.(new) A wide angle arrowhead including suitable structure for mounting to the forward portion of an arrow shaft, comprising:
- a. a plurality of cutting blades, each cutting blade formed to have minimum structure and low drag and including,
 - 1) a leading edge including a cutting edge and a capture point;
 - 2) a trailing edge having a length which bears a low ratio to the length of the cutting edge of the leading edge; and,
 - 3) a base edge having a capture protrusion extending rearwardly of the trailing edge;
 - 1 → b. a mounting fixture of one-piece construction and including,
 - 2 → 1) a chisel point;
 - 3 → 2) a rearward facing circular recess capturing the capture points of the cutting blades;
 - 4 → 3) a first shaft portion extending from the circular recess against which the base edges of the cutting blades align;
 - 5 → 4) an annular beveled ring juxtaposing the first shaft portion, the annular beveled ring having slots, each slot accommodating a portion of the base edge of a cutting blade;
 - 6 → 5) a second shaft portion rearward of the annular beveled ring, the second shaft portion having slots which are extensions of the slots in the annular beveled ring and which also accommodate a portion of the base edge of a cutting blade; and,
 - 7 → 6) a threaded shaft portion extending rearwardly from the second shaft portion for connection to the forward portion of an arrow shaft;
 - c. a mounting ferrule positioned about the second shaft portion of the mounting fixture and capturing the capture protrusions of the cutting blades; and,
 - d. the cutting edge of each cutting blade forming a wide interior angle with respect to the centerline of the mounting fixture and, hence, also with respect to the centerline of an arrow shaft when the mounting fixture is connected to the forward portion of an arrow shaft.

1. A wide angle arrowhead including suitable structure for mounting of a plurality of blades to a mounting fixture and suitable structure for mounting of the wide angle arrowhead to the forward portion of an arrow, comprising:

- a. a fixture of one-piece construction including a chisel point;
- b. a rearward facing circular recess for capture of the forward portion of one or more cutting blades;
- c. a first shaft portion extending from the circular recess against which the base edge at the lower portion of each blade aligns;
- d. an annular and slotted beveled ring juxtaposing the first shaft portion, the slots of which accommodate the base edges at the lower portions of the arrow blades;
- e. a second and larger slotted shaft portion, the slots of which are extensions of the slots in the annular and slotted beveled ring and which also accommodate the base edges at the lower portions of the arrow blades; and,
- f. a threaded shaft portion extending from the larger slotted shaft portion which is utilized to mount the mounting fixture and arrow blades, i.e., the entire wide angle arrowhead, to the arrow shaft, whereby each blade includes a blade capture protrusion at the rearwardly located trailing edge which is captured by a mounting ferrule and the blades are formed to have minimum structure and reduced drag surfaces and to have a low ratio of blade cutting edge length to blade trailing edge length where the interior angle between the blade cutting edge of the blades is at a relatively wide angle with respect to the centerline or longitudinal axis of the arrow shaft.